

## CLAIMS

We claim:

1. A method for the collective production of microlenses at the end of a set of aligned optical fibres, characterised in that it comprises a step of heating the end face of the end of all the fibres by means of an electric arc, the end face of the ends of the fibres being situated on this side of a line of the hottest points of the electric arc and at a distance d from this line in order to round all the fibre ends homogeneously and simultaneously to obtain all the microlenses.

2. A method for the collective production of microlenses according to Claim 1, characterised in that the distance between the front face of the ends of the optical fibres and the line of the hottest points is between 850 micrometres and 950 micrometres.

3. A method for the collective production of microlenses according to Claim 1, characterised in that the set of optical fibres consists of a ribbon.

4. A method for the collective production of microlenses according to Claim 3, characterised in that the ribbon comprises monomode fibres whose terminations comprise a length of silica welded to a length of fibre with an index gradient, the microlenses being produced at the end of the lengths of fibres with an index gradient.